

What is claimed is:

- 1 1. A method for determining the range of a dimensional parameter of a multiplicity of
2 members, comprising:
3 providing at least two sensors including a first sensor and a second sensor;
4 fixing a set of constant distances (Δl) between the sensors including at least
5 one distance between the first sensor and the second sensor, such
6 that the relative distances between sensors are fixed and free from
7 adjustment during the sensors' sensing operation; and
8 measuring the dimensional parameter based upon a ratio ($\Delta t_2 / \Delta t_1$) of a first
9 time segment (Δt_1) and a second time segment (Δt_2), whereby no
10 adjustment of the relative distance between sensors is required.
- 1 2. The method of claim 1, wherein the first time segment (Δt_1) is a duration of time
2 starting when a first sensor starts recording as a fixed point of a member among the
3 multiplicity of members, and ending when a second sensor starts recording as the
4 fixed point of the member.
- 1 3. The method of claim 1, wherein the second time segment (Δt_2) is a duration of time
2 required for the length of a member to pass a single sensor among the at least two
3 sensors.
- 1 4. A method for determining the range of a dimensional parameter of a multiplicity of
2 members, comprising:
3 providing two sensors, including a first sensor and a second sensor;
4 fixing a constant distance (Δl) between the a first sensor and a second
5 sensor such that the relative distances between sensors are fixed and
6 free from adjustment;
7 moving the multiplicity of members relative to the two sensors;
8 predetermining a point on each member;

9 recording a first time segment (Δt_1);
10 recording a second time segment (Δt_2); and
11 computing a dimension of the member.

1 5. The method of claim 4, wherein the dimension of the member comprises the
2 length of the member.

1 6. The method of claim 4, wherein the first time segment (Δt_1) is the time segment from a
2 point in which the length of member entering the first sensor range until the point is
3 sensed by the second sensor.

1 7. The method of claim 4, wherein the second time segment (Δt_2) is the time
2 segment required for the length of the to pass a single sensor, wherein the
3 sensor is the first sensor or the second sensor.